

IN THE CLAIMS:

Please CANCEL claims 25, 28 and 31 without prejudice or disclaimer.

Please ADD claims 38-47 as follows:

17 ~~req 38~~. A method for controlling speed of a fan that cools a microprocessor, said method comprising the operations of:

monitoring temperature of the microprocessor;

producing a control signal based on the temperature of the microprocessor;

and

controlling the speed of the fan in accordance with the control signal.

39. A microprocessor chip, comprising:

a processor module, said processor module processes instructions in accordance with a clock signal; and

a temperature sensor thermally coupled to said processor module, said temperature sensor produces a temperature signal based on the temperature of said processor,

wherein the temperature signal from said temperature sensor is used to regulate the temperature of said microprocessor.

40. A microprocessor chip as recited in claim 39, wherein the temperature signal from said temperature sensor is used to regulate the temperature of said microprocessor chip so as to avert overheating of said microprocessor chip.

41. A microprocessor chip as recited in claim 39, wherein said temperature sensor is integrated with said processor module.

42. A microprocessor chip as recited in claim 39, wherein the temperature of said microprocessor chip is regulated by altering the frequency of the clock signal in accordance with the temperature signal from said temperature sensor.

43. A microprocessor chip as recited in claim 39, wherein said microprocessor chip further comprises:

an activity detector operatively connected to said processor module, said activity detector monitors activity of said processor module,

wherein the frequency of the clock signal utilized by said processor module is controlled based on the temperature and the activity of said processor module.

44. A microprocessor chip as recited in claim 39, wherein said microprocessor chip further comprises:

an activity detector operatively connected to said processor module, said activity detector monitors activity of said processor module; and

a clock unit operatively connected or internal to said processor module, said clock unit produces the clock signal for the processor module, the clock signal having a frequency that varies in accordance with both the activity and the temperature of the processor module.

45. A microprocessor chip as recited in claim 39, wherein said microprocessor chip further comprises:

an activity detector operatively connected to said processor module, said activity detector monitors activity of said processor module; and

a clock mode selector operatively connected or internal to said processor module, said clock mode selector includes a plurality of clock modes that provide different frequencies for the clock signal utilized by said processor module, the particular mode being selected is dependent upon both the activity and the temperature of the processor module.